

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

APR 07 2015

RECEIVED

**REMEDIATION SUMMARY  
&  
SITE CLOSURE REQUEST**

**BOPCO, L.P.  
POKER LAKE UNIT #186  
(Spill dated 4/9/12)  
API-30-015-31973  
Eddy County, New Mexico  
UL-K, Section 32, Twns. 23 South, Range 30 East  
Latitude N 32.258800° Longitude W 103.90680°  
NMOCD Spill reference #2RP-1101**

Prepared By:

**BOPCO, L.P.  
522 W. Mermod, Suite 704  
Carlsbad, N.M. 88220**

April 2015

**Tony Savoie  
Waste Management & Remediation Specialist**

**Site History:**

On the 4/9/12 the pumper at the PLU discovered that a ¼ inch gauge had broken causing crude oil and produced water to leak onto the area around the wellhead then traveled approximately 100 ft. to the edge of the well pad, it was estimated that 5 bbls of crude oil and 5 bbls of produced water were released, all of the fluid soaked into the ground. The release estimate was based on the square footage of the observed stain and calculated at a 2 ft. saturation depth. A C-141 spill report was submitted to the NMOCD on 4/10/12 and issued the spill report #2RP-1101.

Republic Backhoe was contacted on 4/9/12 and initiated a New Mexico One-call for the excavation activities planned.

The initial Form C-141 is included with this report.

**SITE RANKING:**

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer indicated information was unavailable for Section 32, Twns, 23 South, Range 30 East. A depth to ground water reference map utilized by the NMOCD indicates that groundwater should be encountered at approximately two hundred and twenty five feet (225') to two hundred and fifty feet (250') below ground surface. Based on this information the site would be assigned zero (0) points on the depth to ground water remediation requirement.

The search of the NMWRRS also indicated that there were no water wells within 1,000 feet of the release area. Based on this information the site would be assigned zero (0) points on the protection of water wells

Based on the information on the USGS map included in the report there are no surface water bodies within 1000 feet of the release. Based on this information the site would be assigned zero (0) points on the protection of surface water bodies.

NMOCD guidelines indicate that the Poker Lake Unit #186 release site has an initial ranking score of zero (0) points. The soil remediation levels for zero (0) points are as follows:

- Benzene-10 mg/kg
- BTEX---50 mg/kg
- TPH-----5,000 mg/kg
- Chloride---250 mg/kg delineation point and estimated 1000 mg/kg remediation requirement.

The surface is regulated by State of New Mexico. The estimated remediation levels will satisfy the surface management requirement without having to be re-vegetated at this time due to fact that the location of the spill is entirely on the existing well pad. However the pad will be back filled and contoured to prevent future erosion issues.

## **SUMMARY OF SOIL REMEDATION ACTIVITIES**

On 4/11/12 Republic backhoe began the excavation and delineation activities. Soil was excavated and stockpiled on site. On 4/13/12 a test hole was excavated to 4 feet just outside the concrete cellar that surrounds the wellhead. Field tests indicated the TPH and Chloride concentrations were below the remedial action levels. The sample was preserved pending delivery to the lab for confirmation analysis. Republic continued to excavate the contaminated soil and running field tests as they progressed from the wellhead area to the west edge of the well pad. The excavation depth ranged from two feet (2') to five feet (5'). On 4/18/12 confirmation soil samples were collected from the sidewalls and floor of the excavation in three areas identified as sample points A, B, and C, reference the Site Map with Sample Locations and Lab Analysis.

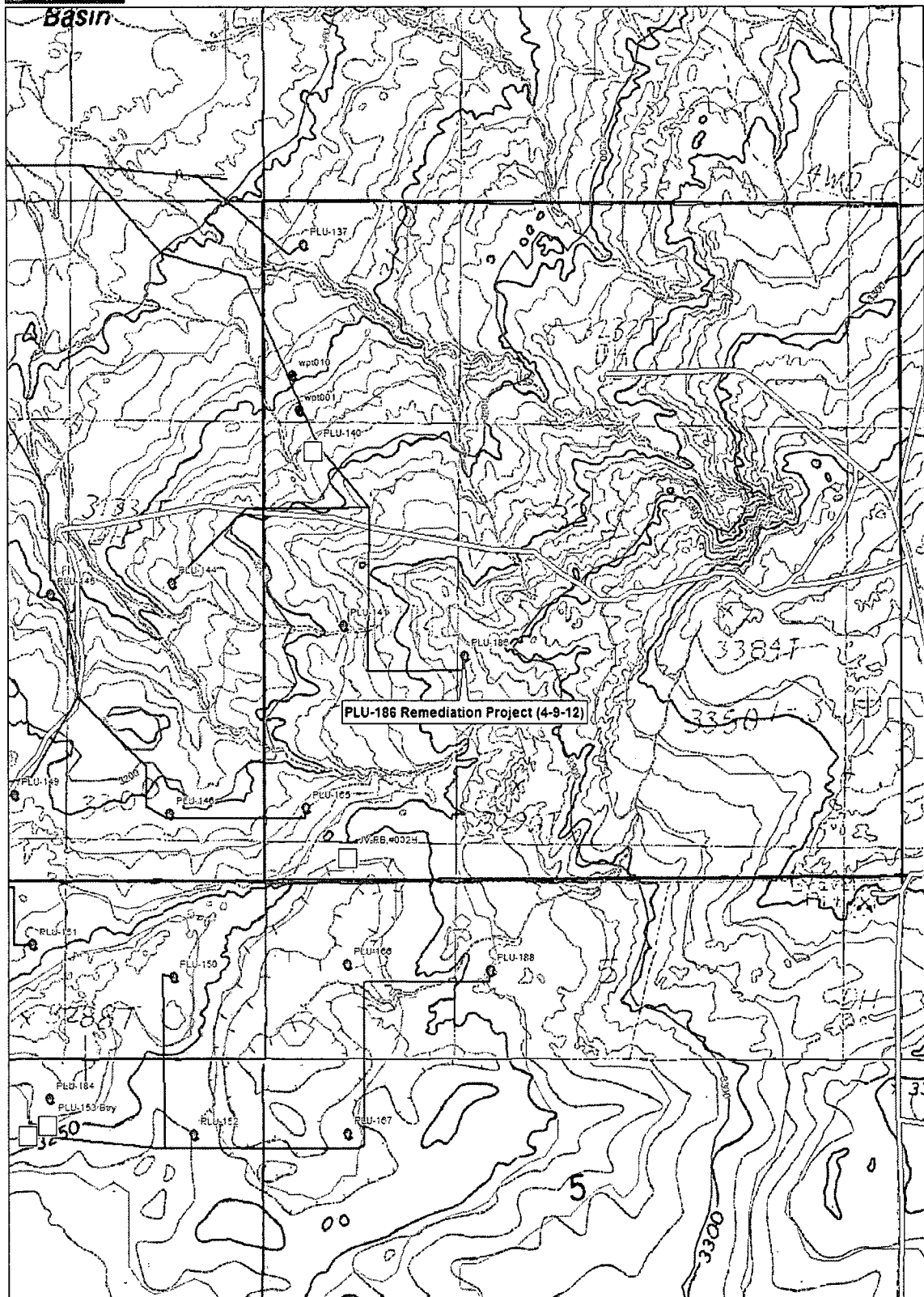
The lab results indicated that the excavated area met the remediation requirements developed through the Site Ranking process.

During a period from 4/11/12 through 4/18/12 approximately 504 cubic yards of soil was hauled to Lea Lands, manifest from Lea Lands during that time period indicated that 604.64 tons were received for disposal under permit #WM-10-035.

Backfill operations began on 4/19/12; Republic Backhoe Services started hauling surplus caliche from the PLU-300H, this caliche had been sampled by Basin Environmental and cleared for backfilling at a remediation project at the PLU-227. The backfilling, compaction and contour activities were completed on 4/23/12.

## **SITE CLOSURE REQUEST**

Remediation activities conducted at the PLU-186 pumping well location have met the objectives defined in the NMOCD guidelines for the remediation of leaks and spills. BOPCO, L.P. hereby request the NMOCD to grant closure for the release at the spill site.



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[www.delorme.com](http://www.delorme.com)



Data Zoom 14-0

District I  
1623 N. Francis Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Bravo Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**RECEIVED**  
APR 11 2012

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

**Release Notification and Corrective Action**

NM 4812115-34555

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P.

26073-7

Contact Tony Savio

Address 522 W. Memorial, Suite 704 Carlsbad, N.M. 88220

Telephone No. 432-356-8730

Facility Name Poker Lake Unit #186

Facility Type C&P

Surface Owner State Of N.M.

Mineral Owner State of N.M.

Lease No. 8910000103R

**LOCATION OF RELEASE**

30-015-31973

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	32	23S	30E	750	South	1650	West	Fully

Latitude N 32.258800 Longitude W 103.906800

**NATURE OF RELEASE**

Type of Release: <u>Produced water and crude oil</u>	Volume of Release: <u>5 bbls produced water and 5 bbls crude oil</u>	Volume Recovered: <u>0</u>
Source of Release: <u>a valve on the wellhead</u>	Date and Hour of Occurrence: <u>4/9/12 Time unknown</u>	Date and Hour of Discovery: <u>4/9/12 10:00 a.m.</u>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Wellcourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Wellcourse	
If a Wellcourse was impacted, Describe Fully.*		

Describe Cause of Problem and Remedial Action Taken.\* A valve on the wellhead cracked, the valve was replaced.

Describe Area Affected and Cleanup Action Taken.\* An area covering approximately 850 sq. ft. on the surface well pad was affected by the release. All of the product had soaked into the ground, the impacted areas will be excavated and sampled on 4/11/12. The spill will be remediated following the NMOCDD guidelines for spill remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCDD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCDD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCDD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Tony Savio</u>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <u>Tony Savio</u>	Approved by District Supervisor: <u>[Signature]</u>	
Title: <u>Waste Mgmt. &amp; Remediation Specialist</u>	Approval Date: <u>APR 24 2012</u>	Expiration Date:
E-mail Address: <u>TASavio@BNSF.net</u>	Conditions of Approval:	
Date: <u>4/10/12</u>	Remediation per OCD Rules & Guidelines. <b>SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: <u>5/24/2012</u></b>	Attached <input type="checkbox"/>

\* Attach Additional Sheets if Necessary

2RP-1101

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141

Revised August 8, 2011

APR 07 2015

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

OPERATOR

☐ Initial Report

☒ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie	
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329	
Facility Name: Poker Lake Unit #186	Facility Type: Exploration and Production	
Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 30-015-31973

LOCATION OF RELEASE

Unit Letter K	Section 32	Township 23S	Range 30E	Feet from the 1750	North/South Line South	Feet from the 1650	East/West Line West	County Eddy
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Latitude N 32.258800° Longitude W 103.906800°

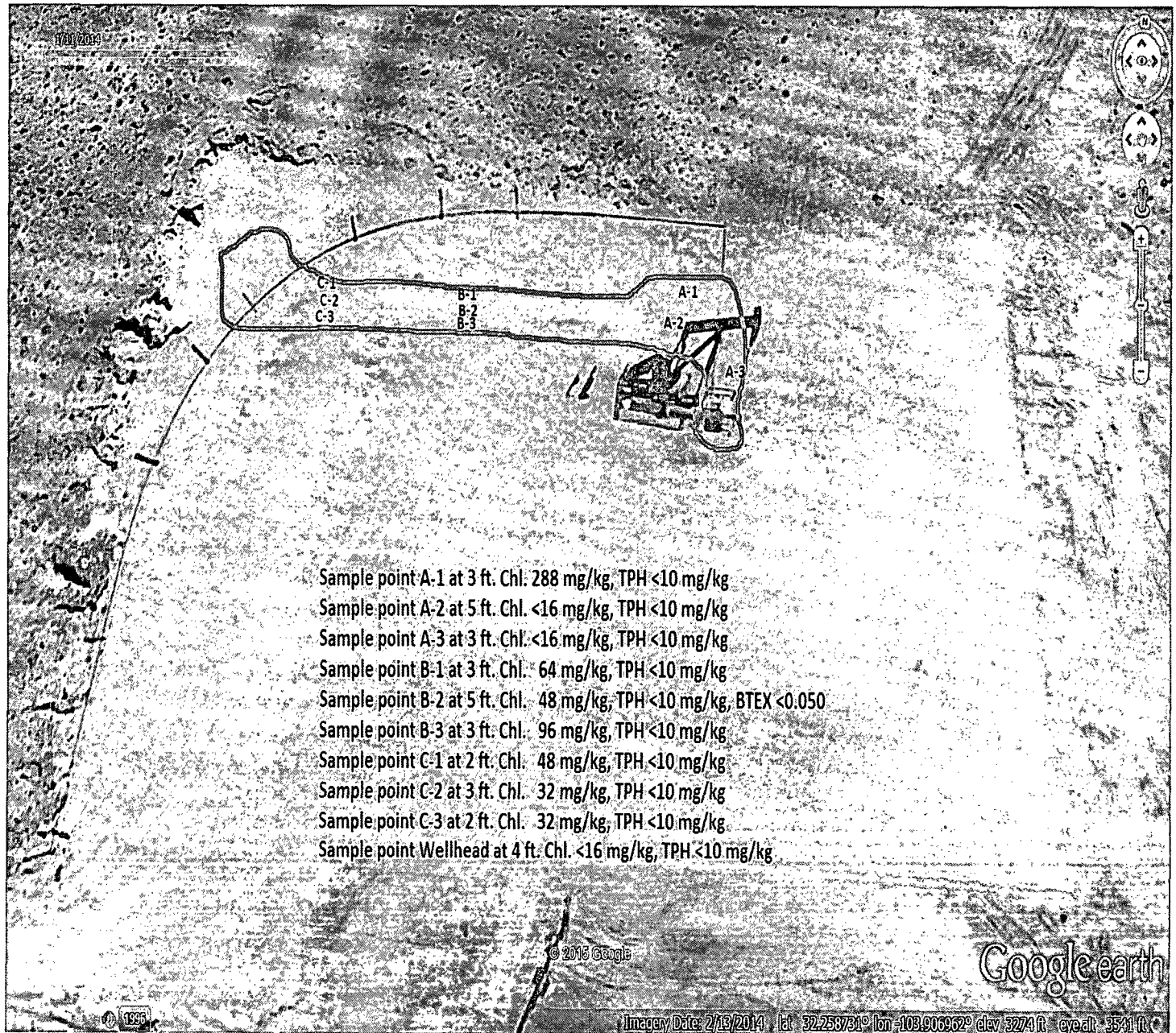
NATURE OF RELEASE

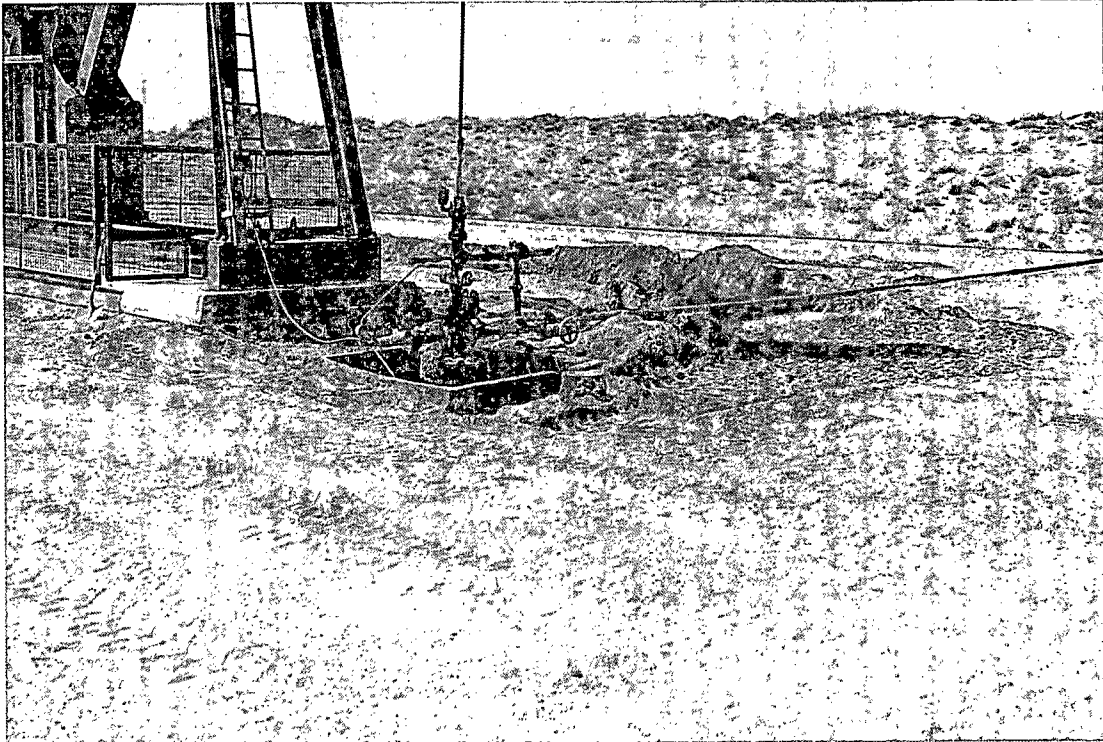
Type of Release: Crude oil and produced water	Volume of Release: 5 bbls crude oil and 5 bbls PW	Volume Recovered: None
Source of Release: Valve on wellhead, <b>Corrected</b> (pressure gauge)	Date and Hour of Occurrence: 4/9/12 time unknown	Date and Hour of Discovery: 4/9/12 at 10:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* The spill was initially reported as a valve failure, and later determined that a pressure gauge on the wellhead had failed and had been replaced.		
Describe Area Affected and Cleanup Action Taken.* The spill had impacted approximately 850 sq.ft. of well pad, all of the fluid had soaked into the ground. Republic Backhoe responded to the spill on 4/11/12 and began excavation and delineation activities. The excavated area was sampled for compliance on 4/13/12 and 4/18/12. Approximately 504 cubic yards of caliche was hauled off and replaced during the remediation. <b>Please reference the attached Soil Closure Request dated April 2015.</b>		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist:	
Title: Waste Management and Remediation Specialist	Approval Date:	Expiration Date:
E-mail Address: tasavoie@basspet.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 4/7/15	Phone: 432-556-8730	

\* Attach Additional Sheets If Necessary

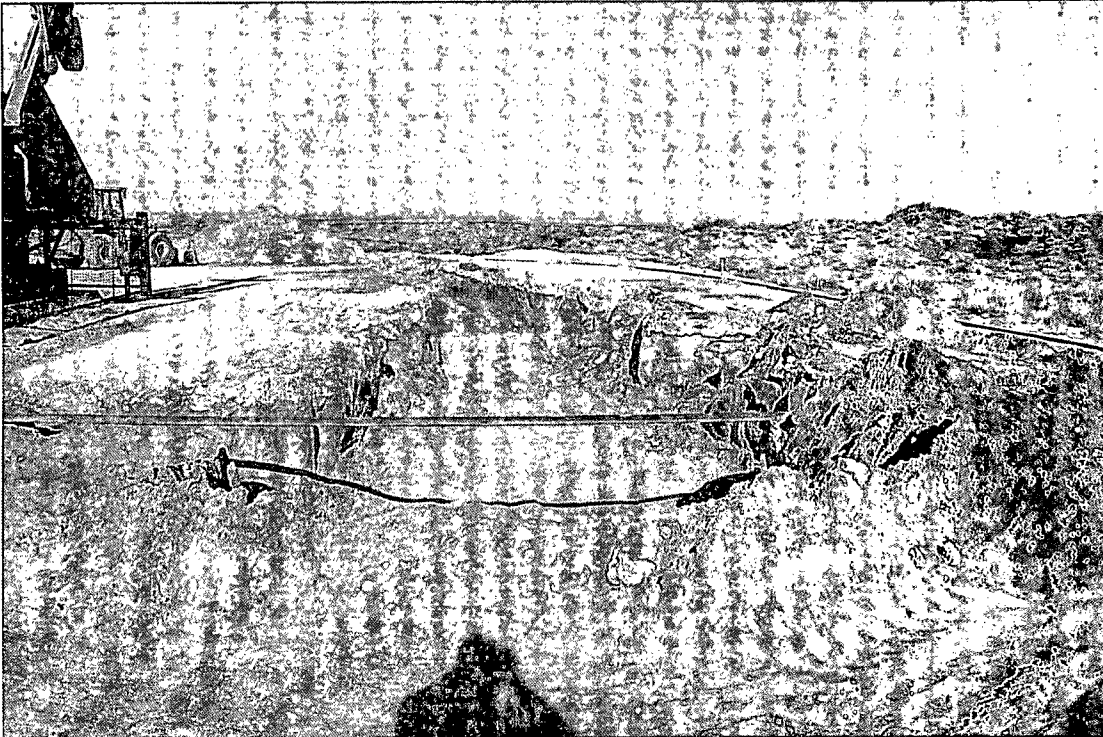
2RP-1101

# SITE MAP WITH SAMPLE LOCATIONS & LAB ANALYSIS



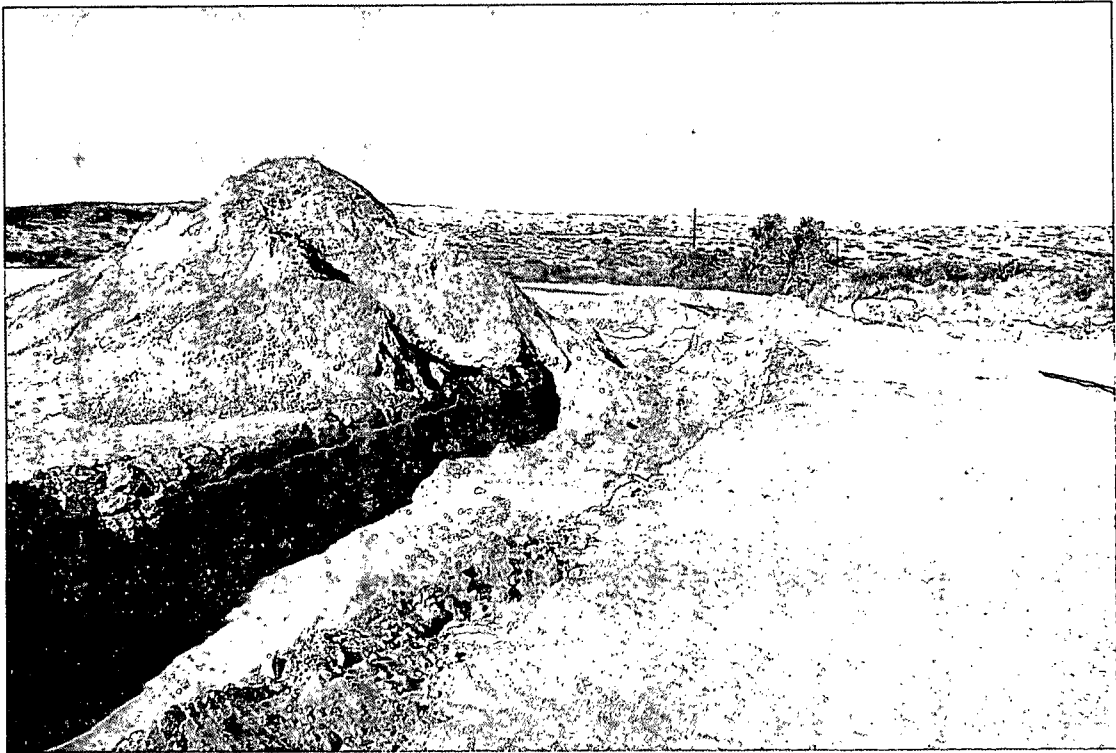


Wellhead sampling event 4/13/12

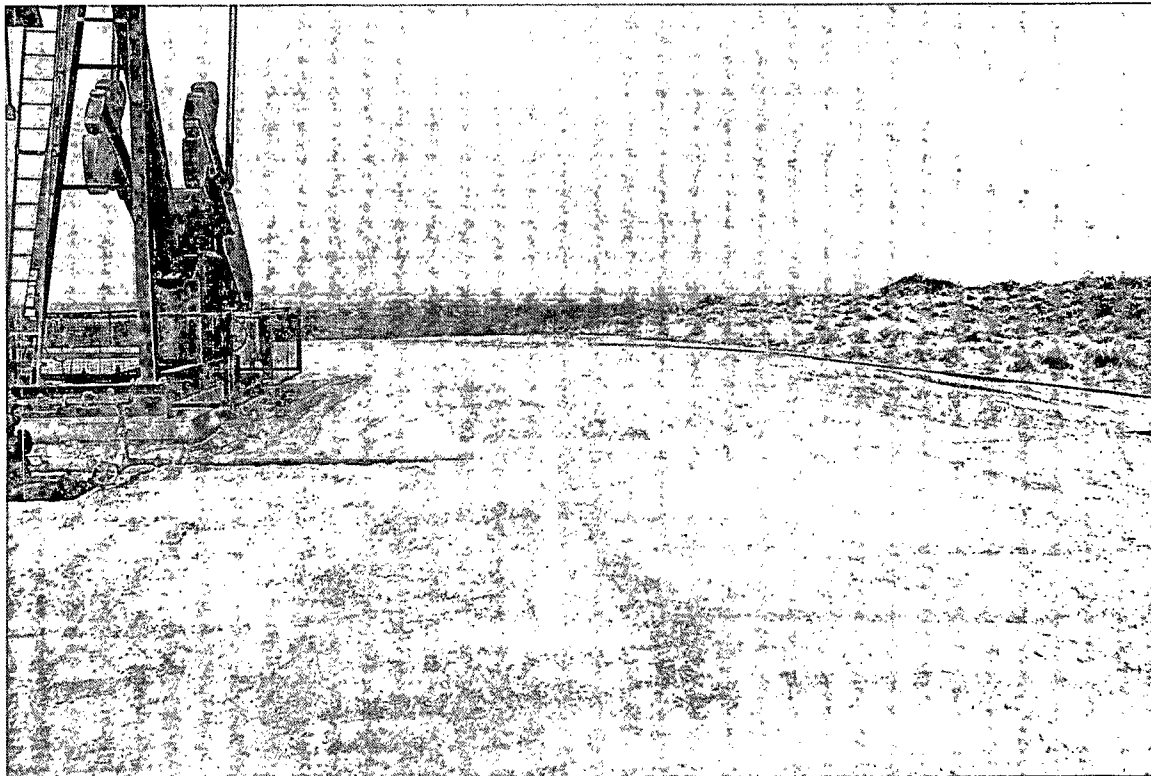
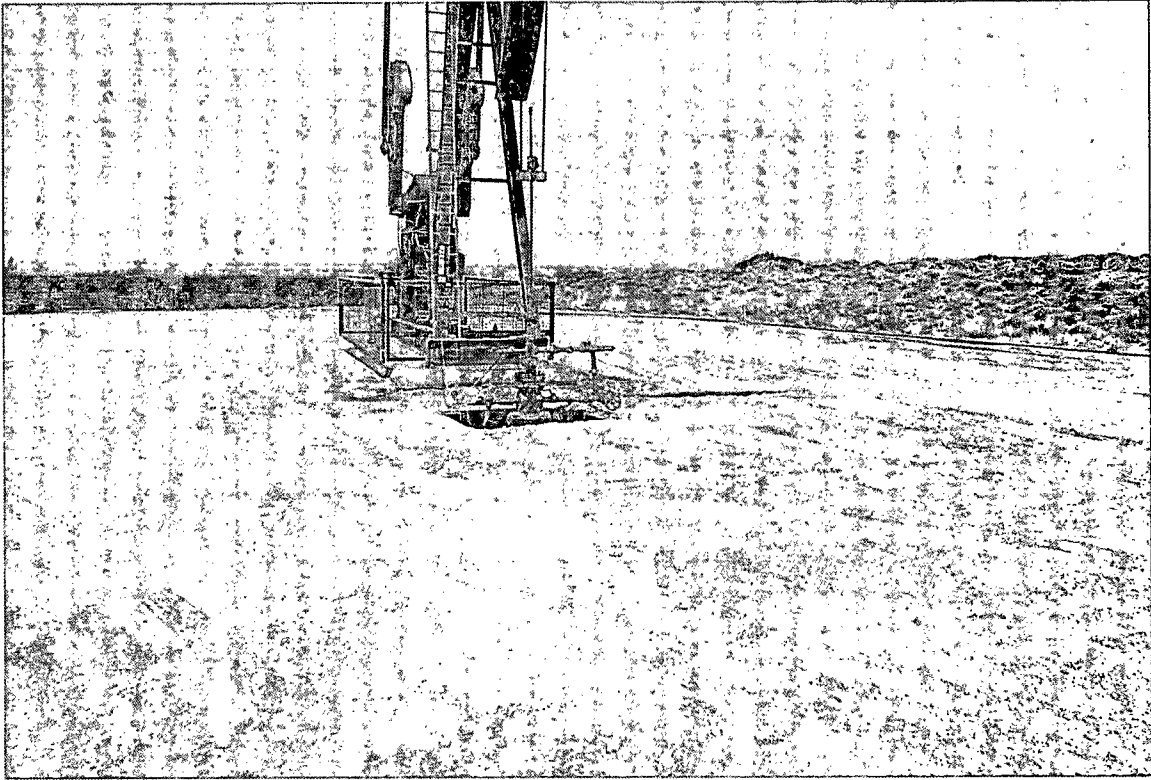


Final sampling event 4/18/12





**Final Sampling event 4/18/12**



**Final Photographs 4/26/12**

April 27, 2012

ERIC GARCIA

REPUBLIC BACKHOE SERVICES

47 E. DICKENS RD

LOVINGTON, NM 88260

RE: POKER LAKE 186

Enclosed are the results of analyses for samples received by the laboratory on 04/19/12 9:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

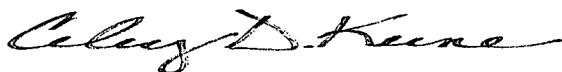
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: A-1 3 FT DEEP (H200900-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane		98.3 %	55.5-154						
Surrogate: 1-Chlorooctadecane		97.3 %	57.6-158						

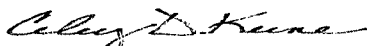
**Sample ID: A-2 5 FT DEEP (H200900-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane		97.6 %	55.5-154						
Surrogate: 1-Chlorooctadecane		95.7 %	57.6-158						

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: A-3 3 FT DEEP (H200900-03)**

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M			mg/kg Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane			94.9 %	55.5-154					
Surrogate: 1-Chlorooctadecane			96.0 %	57.6-158					

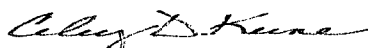
**Sample ID: B-1 3 FT DEEP (H200900-04)**

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M			mg/kg Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane			97.6 %	55.5-154					
Surrogate: 1-Chlorooctadecane			96.6 %	57.6-158					

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B-2 5 FT DEEP (H200900-05)**

BTX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/26/2012	ND	2.13	107	2.00	1.14	
Toluene*	<0.050	0.050	04/26/2012	ND	2.22	111	2.00	0.710	
Ethylbenzene*	<0.050	0.050	04/26/2012	ND	2.23	112	2.00	0.0436	
Total Xylenes*	<0.150	0.150	04/26/2012	ND	6.88	115	6.00	0.304	

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 64.4-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/20/2012	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	

Surrogate: 1-Chlorooctane 99.5 % 55.5-154

Surrogate: 1-Chlorooctadecane 101 % 57.6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B-3 3 FT DEEP (H200900-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	95.1 %	55.5-154							
Surrogate: 1-Chlorooctadecane	93.7 %	57.6-158							


**Sample ID: C-1 2 FT DEEP (H200900-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane		100 %	55.5-154						
Surrogate: 1-Chlorooctadecane		102 %	57.6-158						

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: C-2 3 FT DEEP (H200900-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	98.1 %	55.5-154							
Surrogate: 1-Chlorooctadecane	97.9 %	57.6-158							

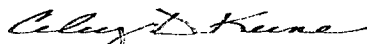
**Sample ID: C-3 2 FT DEEP (H200900-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane		99.4 %	55.5-154						
Surrogate: 1-Chlorooctadecane		102 %	57.6-158						

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/27/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: WELLHEAD (H200900-10)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/26/2012	ND	2.13	107	2.00	1.14		
Toluene*	<0.050	0.050	04/26/2012	ND	2.22	111	2.00	0.710		
Ethylbenzene*	<0.050	0.050	04/26/2012	ND	2.23	112	2.00	0.0436		
Total Xylenes*	<0.150	0.150	04/26/2012	ND	6.88	115	6.00	0.304		

Surrogate: 4-Bromofluorobenzene (PIL) 102 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/20/2012	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/20/2012	ND	184	91.8	200	0.670	
DRO >C10-C28	<10.0	10.0	04/20/2012	ND	196	98.1	200	1.38	

Surrogate: 1-Chlorooctane 99.7 % 55.5-154

Surrogate: 1-Chlorooctadecane 99.1 % 57.6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



## Page 9 of 9

#76



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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April 23, 2012

ERIC GARCIA

REPUBLIC BACKHOE SERVICES

47 E. DICKENS RD

LOVINGTON, NM 88260

RE: POKER LAKE 186

Enclosed are the results of analyses for samples received by the laboratory on 04/19/12 9:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/23/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: A-1 3 FT DEEP (H200900-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane		98.3 %	55.5-154						
Surrogate: 1-Chlorooctadecane		97.3 %	57.6-158						

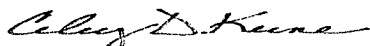
**Sample ID: A-2 5 FT DEEP (H200900-02)**

Chloride, SM4500Cl-B		mg / kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg / kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	97.6 %	55.5-154							
Surrogate: 1-Chlorooctadecane	95.7 %	57.6-158							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/23/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: A-3 3 FT DEEP (H200900-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/20/2012	ND	400	100	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07		
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115		
Surrogate: 1-Chlorooctane		94.9 %	55.5-154							
Surrogate: 1-Chlorooctadecane		96.0 %	57.6-158							

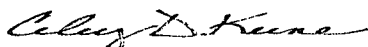
**Sample ID: B-1 3 FT DEEP (H200900-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/20/2012	ND	400	100	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07		
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115		
Surrogate: 1-Chlorooctane		97.6 %	55.5-154							
Surrogate: 1-Chlorooctadecane		96.6 %	57.6-158							

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\*=Accredited Analyte

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Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
ERIC GARCIA  
47 E. DICKENS RD  
LOVINGTON NM, 88260  
Fax To: NONE

Received: 04/19/2012  
Reported: 04/23/2012  
Project Name: POKER LAKE 186  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/18/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B-2 5 FT DEEP (H200900-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	99.5 %	55.5-154							
Surrogate: 1-Chlorooctadecane	101 %	57.6-158							

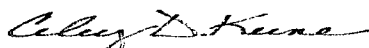
**Sample ID: B-3 3 FT DEEP (H200900-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	95.1 %	55.5-154							
Surrogate: 1-Chlorooctadecane	93.7 %	57.6-158							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

 Received: 04/19/2012  
 Reported: 04/23/2012  
 Project Name: POKER LAKE 186  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/18/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: C-1 2 FT DEEP (H200900-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	

Surrogate: 1-Chlorooctane 100 % 55.5-154

Surrogate: 1-Chlorooctadecane 102 % 57.6-158

**Sample ID: C-2 3 FT DEEP (H200900-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	

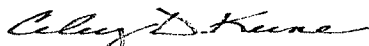
Surrogate: 1-Chlorooctane 98.1 % 55.5-154

Surrogate: 1-Chlorooctadecane 97.9 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

 Received: 04/19/2012  
 Reported: 04/23/2012  
 Project Name: POKER LAKE 186  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/18/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: C-3 2 FT DEEP (H200900-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	99.4 %	55.5-154							
Surrogate: 1-Chlorooctadecane	102 %	57.6-158							

**Sample ID: WELLHEAD (H200900-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/20/2012	ND	184	91.8	200	0.670	
DRO >C10-C28	<10.0	10.0	04/20/2012	ND	196	98.1	200	1.38	
Surrogate: 1-Chlorooctane	99.7 %	55.5-154							
Surrogate: 1-Chlorooctadecane	99.1 %	57.6-158							

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

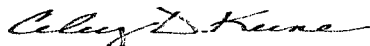
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> Republic Backhoe Service LLC <b>Project Manager:</b> Eric Garza <b>Address:</b> 478 Dickens <b>City:</b> Huntington <b>State:</b> NM <b>Zip:</b> 88260 <b>Phone #:</b> 575-631-0931 <b>Fax #:</b> 575-396-1787 <b>Project #:</b> <b>Project Owner:</b> Bobbie IP <b>Project Name:</b> <b>Project Location:</b> Polar Lake 186 <b>Sampler Name:</b> Eric Garza				<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> Bobbie IP <b>City:</b> Carlsbad <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>		<b>ANALYSIS REQUEST</b>																	
FOR LAB USE ONLY																							
Lab I.D.	Sample I.D.	(GIRAB OR (COMP. # CONTAINERS	MATRIX	PRESERV	SAMPLING																		
			GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE SOLUBLE OTHER	DATE	TIME																	
H2009400																							
1	A-1 3Hdp				4-18																		
2	A-2 5Hdp																						
3	A-3 3Hdp																						
4	B-1 3Hdp																						
5	B-2 5Hdp																						
6	B-3 3Hdp																						
7	C-1 2Hdp																						
8	C-2 3Hdp																						
9	C-3 2Hdp																						
10	well head				4-18																		

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<b>Relinquished By:</b> Cindy Garza <b>Relinquished By:</b>	<b>Date:</b> 4/19/12 <b>Time:</b> 4:45 <b>Date:</b> <b>Time:</b>	<b>Received By:</b> J. Denson <b>Received By:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b> <b>REMARKS:</b> Email: Ericgarza62@hotmail.com Also email Tony Savane
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:		<b>Sample Condition</b> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>CHECKED BY:</b> (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326